

# Review of: "Sputum Interleukin-32 in childhood asthma: correlation with IL-1 $\beta$ "

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**Potential competing interests:** No potential competing interests to declare.

The manuscript deals with a very interesting topic, in addition, the results concern the pediatric population, which also deserves attention due to the small number of published data. Nevertheless, several issues need to be specified or possibly improved.

1. Nothing is known about the treatment of children with asthma - this should be detailed in the manuscript. I assume that children with a severe form of the disease were taking medications during the collection of materials, but what about other groups of patients? It is known that drugs, especially steroids, affect the metabolism of inflammatory cytokines and their influence should be taken into account.
2. Table 1 should be reorganized
  - First, it is absolutely unclear which statistical test was used. The methodology says that the Man-Whitney U test - but only 2 groups can be compared with this test, the table shows that 4 groups were compared - if so, a different statistical test should be used. If two groups were compared against each other, it should be clearly explained - which group against which
  - I believe that the upper part of the table where the averages are presented should be changed to medians and IQR. The averages are not that accurate, just one or two elevated scores and the whole average goes up. Medians represent much more valuable results
  - in the gender row: the title of the row is Gender M/F and the row itself is a percentage. Whom men or women?
  - I am missing the number of people with atopy for each group from the table. It is completely unknown how many such people were in the control group, which is important for data analysis. The impact of atopy, as well as the impact of treatment, should be considered and described
  - The number of blood eosinophils in each group would also be useful
3. The results must clearly specify whether the interleukin concentrations are presented as averages or as medians? This is very important for the critical analysis of the results by those reading the manuscript
4. Was a melting curve performed for real-time PCR assays? Syber Green is a non-specific reagent, it intercalates to all DNA double strands. Have you checked that the dye has not bound to non-specific fragments?

5. There is no reference in the discussion to the correlation of IL-32 with respiratory tests (FEV1, FVC). Why is the correlation negative? What are the possible causes?